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Original Research Article

ENABLERS AND BARRIERS TOWARDS INFANT AND YOUNG CHILD FEEDING PRACTICES AMONG CHILDREN AGED 6 – 23 MONTHS IN THE URBAN SLUMS OF DELHI

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ABSTRACT

Background: Child malnutrition is a major public health issue worldwide. An estimated 144 million children under age 5 are stunted, 47 million are wasted, and 38.3 million are overweight or obese. Around 45% of deaths among children under 5 years of age are linked to undernutrition. Malnutrition throughout the first five years of life cannot just have a poor effect on a child's physical and mental growth, but can also result in death. While malnutrition is a multifaceted issue, improper feeding habits account for more than two-thirds of cases globally. The present study is an attempt to identify the barriers and facilitators to optimal practices faced by the parents / primary caregivers of these children in the urban slum areas of Delhi. The objective is to study the barriers and enabling factors associated with IYCF practices among children aged 6 – 23 months.

Materials and Methods: A community-based cross-sectional study was conducted among 400 children aged 6-23 months residing in the field practice areas of the medical college using simple random sampling. Data was obtained using a semi-structured questionnaire through the researcher-administered interview to parents/caregivers of study participants using good clinical and ethical practices. Data obtained was thus compiled using MS Excel and analysed using SPSS version 26.0.

Results: Advice of healthcare workers and family members, as well as prior knowledge of the benefits of good breastfeeding and complementary feeding practices, were the major enablers for appropriate IYCF practices. whereas existing myths, ill-advice given by family members and traditional practices were the barriers identified under study. The study emphasises the pivotal role of healthcare workers.

Conclusion: Traditional myths and practices should be addressed to combat inappropriate feeding practices, not just with parents / primary caregivers but also with other members of the family. This can be achieved by community health education programs, as well as one-on-one counselling by local ASHAs, ANMs, AWWs and skilled birth attendants.

Keywords: Infant and Young Child Feeding Practices, Enablers and Barriers, Urban Slums.

INTRODUCTION

Nutrition is a vital component for the growth and development of the child, nutritional requirements in the first 1000 days of life are furthermore crucial as its associated with major brain development and rapid physical growth.[1] Poor nutrition during this phase leads to lifelong implications for the child as

well as for future progeny. Malnutrition in children is a public health concern globally, as per estimation, nearly 144 million children under age of 5 years are stunted and 47 million are wasted worldwide, whereas 38.3 million are overweight or obese.[2] According to the 5th National Family Health Survey (NFHS) 2019-21 report, 19.3% of under-5 children in India suffer from wasting. 35.5% of the children in this age group are too short for their age.[3] As per the Global Hunger Index 2022 report, prevalence of undernourishment in the population stands at 16.3%, child stunting is at 35.5%, child wasting is at 19.3% and child mortality rate is 3.3.[4] While malnutrition is a multifaceted issue, the path to prevention is virtually identical: adequate maternal nutrition before and during pregnancy and while breastfeeding; optimal breastfeeding in the first two years of life; improper feeding habits account for more than two-thirds of cases globally. According to the seminal findings presented in the Lancet Series of articles on Maternal and Child Nutrition, exclusive breastfeeding throughout the first six months of a child's life and age appropriate complementary feeding has been recognised as the most effective strategies for lowering childhood mortality and morbidity, particularly during the first phase of complementary feeding (6–12 months) when foods of low nutrient density and inadequate energy begin to replace breastmilk and rates of diarrhoeal illness caused by food contamination are at their highest.[5] After about 2 years of age, it is very difficult to reverse stunting that occurred at earlier ages, suggesting a 'critical window' for prevention of growth faltering.[6] However, there are various factors associated towards infants and young child feeding nationwide.

Our study was an attempt to find out various enablers and barriers towards IYCF practices among children aged 6 months to 23 months in the peri-urban area of Delhi.

Objective: To study the barriers and enabling factors associated with IYCF practices among children aged 6 – 23 months.

MATERIALS AND METHODS

A community based cross sectional study using pre tested validated questionnaire was conducted, between February 2021 to August 2022 to find out various enablers and barriers towards breastfeeding and complementary feeding practices for children aged 6 months -23 months among the residents of Pul Pehladpur and Madan Pur Khadar in South East district of Delhi which are catered under health training centres of a medical college. These areas have a unique feature that they lie at the confluence of three states, ie. Delhi, Haryana and Uttar Pradesh, and the majority of the population is migratory, thus residents also follow their native cultural child care practices. A list of eligible children was obtained from the health centres, anganwadi in the area and a combined list was used as the sampling frame. House-to-house field visits for interview-based data collection from primary caregivers or parents were conducted via a simple random sampling method using an online random number generator.

Sample size: Taking NFHS 4 (2015-16) as reference for prevalence (35.4%)of complementary feeding, a total of 400 participants were enrolled under the study.[7]

Statistical analysis: Data was tabulated in MS Excel and analysed using IBM Statistical Package for Social Sciences (SPSS Inc., USA version 26.0). Descriptive stats were expressed as mean value □ sd, and the association of variables was expressed as chi square and a p value of < 0.05 at a 95% confidence interval was taken as significant.

Ethical Consideration: The Study was approved by the institution's ethics committee and was conducted following Good Clinical Practices. All the participants were well informed regarding the purpose of the study, and after written informed consent, were enrolled in the study.

RESULTS

Our study evaluated the reasons behind following or not following the recommended IYCF practices as per the guidelines. The questions presented to the parents/primary caregivers of the children aged 6 – 23 months were in a semi-structured format, where the most common reasons were listed, and the option of "other" was also provided to include reasons that were not listed in the questionnaire. The participants could give multiple responses, and all the reasons given were marked. The reasons behind appropriate breastfeeding and complementary feeding practices are shown below:

Table 1: Prevalence of WHO – WHO-recommended age-appropriate indicators associated with Infant and Young Child Feeding Practices among children aged 6-23 months.

	IYCF 8 Core indicators	Frequency (%)
1	Early Initiation of Breast Feeding	198 (49.5%)
2	Exclusive Breast Feeding	180 (55%)
3	Continued Breastfeeding after 1 year (Children aged 12 months and above, n =270)	203 (75.1%)
4	Introduction of solids/semisolids at 6–8-months	150 (37.5%)
5	Minimum diet diversity	235 (58.8%)
6	Minimum meal frequency	239 (59.8%)
7	Minimum acceptable diet	166 (41.5%)
8	Consumption of iron-rich or iron-fortified foods	98 (24.5%)

[Table 1] presents the findings of the prevalence of age-appropriate IYCF practices among the 400 children in this study. Early initiation of breastfeeding was 49.5% and 55% children were exclusively breastfed. Continued breastfeeding after the age of 1 year was found to be 75.1%. 37.5% children had timely introduction of solid and semisolid foods at the age of 6-8 months, while 58.8% children had received minimum diet diversity (MDD) and 59.8% children had the minimum meal frequency. 41.5% children had the minimum acceptable diet in the last 24 hours. Lastly, a low proportion, 24.5% children, had received iron-rich or iron fortified foods.

Table 2: Enablers and Barriers to appropriate Infant and Young Child Breastfeeding practices among children aged 6- 23 months.

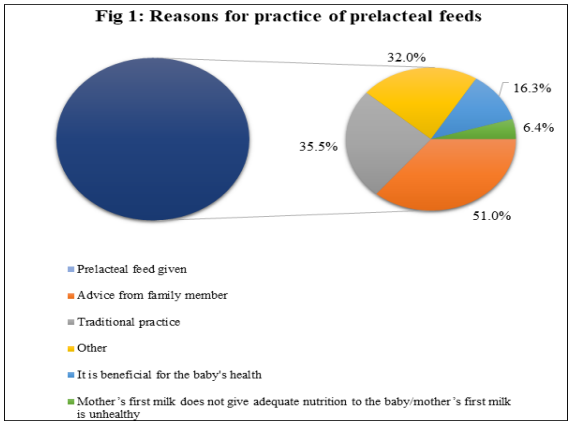
Indicators	Enablers	Barriers
Early initiation of breastfeeding	(n=198)	(n=202)
	• Advice from healthcare worker (25.2%) • Advice from family member (20.7%) • Prior awareness of breastfeeding benefits to child (19.2%) • Followed same practices with previous children(17.2%) • Other (0.5%)	• Mother/baby was unwell after the delivery (39.6%) • Followed same practices with previous children (32.2%) • Advice from family member(30.7%) • Advice from a healthcare worker(24.3%) • Thought it was beneficial for child(9.4%) • Other (7.9%) • Don't know/ don't remember(4.5%)
Exclusive Breastfeeding	(n=180)	(n=220)
	• Advice from a health worker (57.8%) • Advice from family member (44.4%) • I knew it was beneficial for the child (40.0%) • Followed the same practice with previous children (32.2%) • It was convenient (16.1%) • It is the general practice in the community (14.4%) • It was cheap (6.7%) • Infant formula milk is not good for the baby (3.9%) • It was rewarding/I felt happy (3.3%) • It is my right to breastfeed my baby (3.3%) • Baby did not like soft/semi-solid/solid food (1.7%)	• Advice from family member (50.5%) • It is not normal practice in our household/community (25.0%) • Did not have enough milk supply (18.6%) • Followed the same practice with previous children(12.3%) • Mother or child was sick (10.0%) • Breastfeeding was painful (9.5%) • Baby not able to suckle / attach to breast (4.1%) • Baby refused breast (4.1%) • Poor quality of milk (3.6%) • Breast condition / problem (E.g.: cracked nipples) (2.7%) • Breastfeeding younger child (2.3%)
Continued Breastfeeding after 1 year	(n=203)	(n=67)
	• Advice from a health worker (45.8%) • Baby does not refuse/Baby is not satisfied solely with food (43.8%) • It is beneficial for the child (42.4%) • It is convenient (37.9%) • Advice from family member (24.6%) • Followed the same practice with previous children (13.8%) • It is cheap (9.9%) • It was rewarding/I felt happy (8.4%) • Infant formula milk is not good for the baby (5.9%) • Infant formula milk is expensive (4.9%) • It is the general practice in the community (0.5%)	• Baby stopped / lost interest (37.3%) • Breastfeeding difficulties (pain, not enough milk etc.) (34.3%) • Mother – too busy (lack of time) (13.4%) • Mother/baby – unwell (7.5%) • Mother – pregnancy (7.5%) • Advice from family member (7.5%) • Quality of milk became bad (6.0%) • Mother – working / separated (4.5%) • Don't know / Don't remember (4.5%) • Mother - psychological state (1.5%) • Breastfeeding younger child (1.5%)

Multiple response table

Table 3: Reasons associated with the time of initiation of Complementary feeding

S.no.	Time of complementary feeding initiation	Reasons
1	Complementary feeding was introduced before 6 months (n=42)	• Traditional practice (54.8%) • Baby was not content with just breast milk (52.4%) • Advice from family member (35.7%) • Followed similar practice with previous children (14.3%) • Baby was unwell(11.9%) • It is good for the child(11.9%) • Don't know / Don't remember (7.1%) • Advice from a health worker (4.8%)
2	Complementary feeding was introduced between 6 - 8 months (n=150)	• Advice from a health worker (52.7%) • Advice from family member (34.0%) • Traditional practice (36.7%) • Baby was not content with just breast milk (24.7%) • Followed similar practice with previous children (42.0%) • Baby was unwell (4.7%) • Knew that it is good for the child (12.7%)
3	Complementary feeding was introduced after 8 months (n=208)	• Advice from a health worker (54.0%) • Advice from family member (49.5%) • Traditional practice (36.0%) • Baby was not content with just breast milk (8.5%)

		• Followed similar practice with previous children (16.0%) • Baby is unwell (2.5%) • Thought that it is good for the child (6.0%)



From [Figure 1] it can be seen that among the 141 parents / primary caregivers who gave prelacteal feeds to their children, the most common reasons given were that it was advised by the family members i.e., 51%, followed by traditional norms (35.5%). 16.3% believed that prelacteal feeds were beneficial for the child. Around 32% were other reasons which mostly encompassed formula milk given in the hospital post-delivery and a few cases where mother was Covid-19 positive and hence was separated from the baby after birth (early 2020). 6.4% respondents also reported that mother's first milk is unhealthy for the newborn child and hence should be discarded.

DISCUSSION

The present study highlights various enablers and barriers towards appropriate infant and young child feeding practices prevalent in the community.

Factors behind Early Initiation of Breastfeeding (EIBF): In the current study, the most common reasons reported by the parent/primary caregivers who had practiced EIBF, was due to advice by health workers and family members, knowledge that it is good for the child and similar practice with previous children. A similar finding was seen in a qualitative study from Ethiopia in 2018 by Mekonnen et al., who had a higher prevalence of EIBF due to advice given by a healthcare worker at delivery.[8] Similar reports were also seen in a mixed-methods study done in Bangladesh on breastfeeding in 2010 by Haider R. et al.[9]

Reasons for not practicing EIBF in the current study were found to be due mother or baby being unwell after the delivery, similar practice in previous children and advice from family members. In contrast, a longitudinal study done in Nairobi by Kimani-Murage et al. to elicit barriers and enablers to IYCF practices found that failure of EIBF was mainly due to low milk production and did not find any cultural reasons.[10] On the other hand, Haider R. et al. found some similar and some dissimilar barriers, such as lack of knowledge, lack of milk production or late production, bathing ritual after delivery, mother's health and delay in bringing the child to the mother.[9]

Factors behind Exclusive Breastfeeding (EBF): Several reasons for practising EBF were reported in the present study, of which the most common ones were advice from health workers, family members and knowledge of the benefits of EBF. The reasons seen in the current study were also reported in a study by Synnott et al. They elicited the reasons behind the practice of various IYCF measures among parents from 5 different European countries in 2007.[11] The reasons highlighted were breastfeeding being convenient, practice with previous children and knowledge of its benefits. Ramani et al. in 2019, through a qualitative study in informal settlements in Mumbai, categorized the most common reasons for EBF into individual, interpersonal and organisational levels and environmental factors.[12] Almost all of the reasons aligned with those of this study. Some that did not were due to the migratory population included in the Mumbai study.

Reasons for non-EBF in this study were mainly due to family members' advice, normal household/community practice, and lack of milk supply, among several other reasons. In Europe, Synnott et al. also reported that non-EBF was due to poor milk supply, but also cited the reason of the mother having to work.[11] Very similar reasons were found in a 2014 study by Daly et al. in Australia, along with breastfeeding problems such as soreness.[13] Daly et al. mentioned some reasons that were not assessed in the current study, such as community and family support. Haider R. et al, also reported some reasons that were not seen in the current study. In this study in Bangladesh, EBF prevalence was only 10%, and some of the reasons behind this low value were the feeding of water, fruit juice to children and a lack of knowledge regarding EBF.[9]

Factors behind Continued Breastfeeding (CBF): Reasons for CBF after the age of 12 months were seen to be mainly due to health worker advice, the baby not being satisfied only with food, knowledge that it is beneficial for the child and BF being convenient. Several other reasons were also reported, such as advice from a family member. Similarly, Bektas et al., assessing the practices of the Turkish community in the Netherlands in 2022, found grandmother's advice to continue breastfeeding was a facilitator. However, this also created pressure on the mother as a lack of breastfeeding was seen as a sign of an 'inferior mother'.[14]

Burns et al. reported that although a lot of children were given complementary feed in their study in Congo, CBF was still practiced as the majority of these children were not given any other source of milk.[15] In Ethiopia, Mekonnen et al. mention that

children are fed until 3 years of age or until the mother is pregnant again. These findings were not seen in this study, mostly due to the high fertility rates, as well as different cultural and child-rearing practices prevalent in African countries compared to India.[8]

Factors behind Timely Introduction of Complementary Feeding (TICF): In the current study, starting CF before 6 months was found to be mainly due to traditional practice, baby being discontented with BF and family member's advice among several other reasons, while TICF at 6 – 8 months was practiced mostly due to advice from health worker. Synnott et al, back in 2007, also reported doctors' advice and traditional practice to be the main facilitators,[11] while in Ethiopia, Mekonnen et al. quote the awareness of parents.[8]

Kimani-Murage et al. in their study in Kenya, mentioned that early introduction of CF was due to insufficient milk reported by the mother.[16] In Ethiopia, CF was seen earlier than 6 months when mothers were working, and breastmilk production apparently decreased. Some participants also said that they waited for their child's tooth to erupt. Such findings were not reported in the current research. However, Burns et al. reported issues similar to this study, such as breastmilk insufficiency along with the child not being satisfied solely through breastmilk.[15]

Some other factors found to affect IYCF practices were cultural beliefs, community events and practices, maternal education level and employment.

A few reasons of reasons which were not assessed in this study, which may also affect IYCF practices, are marital status, HIV status of mothers, mother's age at pregnancy, desirability of child during pregnancy, maternal nutrition and mother's decision-making power.

Strength: This study is a community-based study in urban slums of Delhi, which mainly comprises of migrant population, so we were able to identify various cross-cultural practices that are followed in other regions of India.

Limitations:

The study might have been affected by Social desirability bias, recall bias.

The study did not include appropriate daily feeding details that impact the growth of the child.

Potential confounding environmental and social factors were not assessed.

CONCLUSION

The study highlights major enablers to appropriate IYCF practices were advice from health workers, family members and knowledge of benefits to the child. Whereas the key barriers leading to inappropriate practice were ill advice from family members, traditional practice and following the same practice with previous children.

The pivotal role of healthcare workers, i.e., doctors, nurses, ASHAs, ANMs and skilled birth attendants, in providing the right information, counselling and ensuring appropriate practice, is apparent from this finding.

Traditional myths and practices should be addressed to combat inappropriate feeding practices, not just with parents / primary caregivers, but also with other members of the family. This can be achieved by focusing on community health education programs, as well as one-on-one counselling by healthcare providers.

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